

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1. (Currently Amended) A signals intelligence analysis method, comprising the steps of:

storing a library of iconic representations of image detection solution fragments in a memory, said solution fragments corresponding to different image components;

placing a plurality of said iconic representations in a graphical user interface;

connecting said iconic representations with one or more data pathways to graphically define flow of data between the solution fragments and to represent a solution, wherein said solution identifies the presence of said plurality of image components in an input image;

converting said iconic representations and said one or more data pathways displayed in said graphical user interface into a behavioral representation of said solution; and

using said behavioral representation to configure a reconfigurable platform to detect the presence of said plurality of image components in an input image.

Claim 2. (Original) The method of claim 1, wherein at least one of said one or more data pathways includes event trigger information.

Claim 3. (Original) The method of claim 1, wherein said step of converting further comprises the steps of

preparing, based on said iconic representations and said one or more data pathways, a high-level database corresponding to said solution; and

translating said database into said behavioral representation.

Claims 4-12. (Canceled)

Claim 13. (Currently Amended) A signals intelligence analysis system, comprising:  
a reconfigurable hardware computing platform, said platform configured to execute a signals intelligence analysis solution;  
a front end configured to receive input in real time;  
a data storage medium, communicatively coupled to said front end, and configured to buffer said input, wherein said front end is configured to synchronously pass said input to said reconfigurable hardware computing platform at a frequency based on a complexity of said solution, and wherein said front end is configured to synchronously pass said input to said reconfigurable hardware at a limiting frequency of the most complex solution currently loaded into said hardware.

Claims 14-15. (Canceled)

Claim 16. (Original) The system of claim 13, wherein said reconfigurable hardware platform is configured to execute using parallel circuitry.

Claim 17. (Original) The system of claim 13, wherein said front end is an analog front end, and includes a plurality of ports communicatively connected to a plurality of reconfigurable hardware computing platforms.

Claim 18. (Canceled)

Claim 19. (Original) The system of claim 13, wherein said reconfigurable hardware computing platform includes a host computer and a gate array.

Claim 20. (Currently Amended) A signals intelligence analysis solution development system, comprising:

a computer having a display;

one or more memories storing computer-executable instructions that cause said computer to perform the following steps:

receive a user request to display a plurality of icons related by one or more data pathways and event triggers, said icons corresponding to instructions for detecting the presence of a plurality of image objects in an input image;

generate a high-level database based on said icons, one or more pathways and event triggers; and

supply said database to a behavior generator, wherein said behavior generator translates said database into behavioral code used to configure a target platform to detect the presence of said plurality of image objects in an input image, and to issue an indication based on a proximity of said detected image objects.

Claim 21. (Original) The system of claim 20, wherein said behavioral code is in Register Transfer Logic format.

Claim 22. (Original) The system of claim 20, wherein said behavioral code lacks pre-defined input/output elements to allow downstream combination with other solutions.

Claim 23. (Original) The system of claim 20, further comprising a solution mixer configured to receive a plurality of sections of behavioral code, each section corresponding to a solution, and to restructure said plurality of sections of behavioral code into a single monolithic block of code.

Claim 24. (Original) The system of claim 23, wherein said solution mixer creates one or more input/output elements for said solutions.

Claim 25. (Original) The system of claim 24, wherein said input/output elements include computer code for communicating with a target reconfigurable hardware computing platform.

Claim 26. (Original) The system of claim 24, wherein said input/output elements include computer code for communicating with an analog front end.

Claim 27. (Original) The system of claim 23, wherein said solution mixer creates one or more data pipelines between said solutions.

Claim 28. (Original) The system of claim 23, wherein said solution mixer adds additional code for preventing unauthorized execution.

Claim 29. (Original) The system of claim 23, further comprising a reconfigurable hardware computing platform, wherein said monolithic block of code is used to configure said reconfigurable hardware computing platform to execute a solution based on said block of code.

Claim 30. (New) The method of claim 1, further comprising visually highlighting a detected image component in said input image.

Claim 31. (New) The method of claim 30, further comprising sending an event trigger signal when a combination of at least two image components is detected in said input image.

Claim 32. (New) The method of claim 31, wherein said event trigger signal is sent based on a proximity between said at least two image components.

Claim 33. (New) The method of claim 1, further comprising:  
sending an output trigger signal in response to detecting said image components in an input image; and  
in response to said trigger signal, highlighting said detected image components in said input image and forwarding a copy of the input image to a predetermined destination.

Claim 34. (New) The method of claim 1, further comprising:

viewing said iconic representations in a graphical user interface;

replacing one of said iconic representations with a new iconic representation, wherein said new representation corresponds to a solution identifying the presence of a new image component;

generating a new behavioral representation using at least said new iconic representation;

and

using said new behavioral representation to reconfigure said platform to detect the presence of at least said new image component in an input image.